

The Impacts of COVID-19 on Oman's National Health Security

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ABSTRACT

The COVID-19 has had a massive impact on the Oman national health security system, putting the officials and medical crews under sustained pressure and challenges to cope with this crisis. We need to improve the national health security system to achieve health equity and to protect us all from the threat of COVID-19 and future pandemics. This study addresses the impact of COVID-19 on Oman national health security system. The study focuses on three objectives to determine the relationship between COVID-19 and national health security in Oman, to investigate the impact of COVID-19 on national health security, and to identify the role of government in mitigating the impacts of COVID-19 on national health security. The study applies a qualitative method approach and was conducted in two parts using questionnaire surveys and interviews. The study has found that, having a strong relationship between COVID-19 and national health security, the COVID-19 has had impacts on Oman national health security system and the role of the government in mitigating the impacts is very important. The purpose of the study is to generate recommendation to Oman national health security system to pave the way to a robust and resilient national health security system.

Keywords: Oman; COVID-19; Security; Oman national health security.

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1. INTRODUCTION

COVID-19 refers to Coronavirus disease-2019, which is an infectious disease caused by a recently discovered coronavirus. In the beginning of December 2019, the first case of coronavirus was registered in Wuhan city in China. China public health officials informed the World Health Organization about the situation in and that they were having a dangerous novel new virus causing illness in the city. They determined that it was COVID-19 and dramatically spreading in and out of Wuhan. China has implemented serious action to stop the spreading of the virus, shutting down public life, no gathering, market closing, and all citizens had to stay in home. Virus was spreading all over the world, the WHO classified the virus as a pandemic (WHO, 2020b).

The COVID-19 has placed people's lives, livelihoods and dignity in jeopardy, demonstrating that the COVID-19 is far more than a health crisis. In addition to immediate and devastating death loss, COVID-19 has led to a shocking increase in unemployment and a multi-stage economic crisis. It has shown major flaws in the delivery of social care, as well as social security and preparedness plans in the course of facing health crisis. As with most crisis, those already in vulnerable and precarious situations and minimum able to endure extra shocks to their well-being are firmness the brunt of the pandemic. Human security challenges, as posed by COVID-19, recognize that everyone's health is dependent on effective disease prevention programs, the availability of and access to high-quality healthcare and the wider environments in which people live. As COVID-19 spreads around the globe, the time has come to prioritize human security in our efforts to halt the pandemic's spread and rebuild a more inclusive and resilient world (Nihas, 2020).

The spread of COVID-19 in the Sultanate of Oman has generated an unprecedented precarious situation. The radical measures have been taken by the government to restrain the outbreak of the pandemic, which, by one way or another, has caused sustainable implications on the various sectors. On the side of economic sector, the lockdown measures that have been implemented led to an economic blow. The shopping malls, restaurants, travel, medium and small projects and tourism companies are closed. The ban on the international flights has significant effects on tourism and hospitality sectors, business travel and cancellations of travel booking and hotels.

COVID-19 has triggered a predicament on the health sector in the Sultanate. The medical crews are working under much stress causing depression to them, affecting their work negatively. The hospitals' capacity is overwhelmed, with the shortage of medicines and specific-design personal proactive equipment for staff. The dedicated doctors are focusing on dealing with COVID-19 patients, affecting other regular patients in the medical wards under doctors' accountability. Moreover, medical research, audit and training are halted.

This study is useful for students and researchers who seek further information's about the impact of COVID-19 on the national health security in Oman. At a broader level, the study may be useful as a reference material for researchers who research in the same field. This study is also intended for audience inside health security and economic sciences, e.g., political sciences, economics, health, psychology and other areas.

In the context of Oman, a limited number of researchers have studied, the impacts of outbreaks of COVID 19 in Oman. For example, Al Ghafri et al. (2020), studied with the following outcomes. The study found that amenities in Muscat governorate, with the support from the national teams, appeared to constantly raise-up their responses and preparedness to encounter the epidemiological forecast in the governance of COVID-19. Abdallah Badahdah (2020) studied the mental health of health care workers in Oman during the COVID-19 pandemic and one of the outcomes was that the mental health of health care workers has been harshly affected. He predicted that it would continue, to various degrees, with grave effects in the foreseeable future.

2. REVIEW OF LITERATURE

Holmes (2014) wrote that, the modern conceptions of national security emerged in the 17th century during Europe's Thirty Years War and England's Civil War. The Peace of Westphalia, which was signed in 1648, established the principle that the nation-State had sovereign power over not only domestic affairs like religion, but also external security. The pro-Westphalia global system was constructed on the presumption that there existed a worldwide principal dominating the affairs of States led by emperors,

kings, popes and princes. That was indeed the principle of the Holy Roman Empire. The new thought of the nation-State acquired a different approach. Stability and peace might be better served if individuals were not slaughtering each other over several global principles. It would be best to have a worldwide system constructed on the balance of nation-States dedicated to the restricted purposes of self-defence and national sovereignty.

According to Morgenthau & Thompson (2006), the national security must be defined as integrity of the national territory and its institutions. The notion of national security was born and developed during the Cold War. In reality, until the 1970s, national security was thought of solely in military terms. This is because the first decades of the Cold War were primacy linked with the realistic approaches. Realists in the period of 1950s to 1960s supported a "reductionist" definition of national security, which was actually synonymous to military security. Military power is the only tool capable of ensuring State survival, and it is the only legitimate object of security policies. While Wolfers (1952) argues that the beginning of the Cold War brought about a shift in the common understanding of national interest, which was now conceived as national security interest, this shift was largely due to some important changes in the international system, such as nuclear warheads and the pressure and stress over policy makers they produced. On this regard, his article "National Security as an Ambiguous Symbol" can be considered the primary attempt to conceptualize the notion of national security whose usage was, and somehow still is, largely abused. According to Wolfers (1952), the notion of national security was born as an evolution of the concept of national interest. In addition to that, Wolfers' interpretation of national security bears the influence of the classics and of classical realism such as Hobbes (2006), Morgenthau & Thompson (2006). In their account, security is States' primary concern. Thus, security is conceived in terms of power, while international politics is the environment in which rivalries and wars take place for achieving more power. Military power is, thereby, the most immediate tool for ensuring national security, the one State's survival depends upon. Therefore, this first description of security points out the politico-military features of national security, whose goals are, first and foremost, the protection of the political independence and the territorial integrity of the State. The concept of national security has been mainly on the preservation of sovereignty, territorial integrity, and internal stability with the focus on the coercive power of the State (Bonsle, 2015).

Nihas (2020) stated that the traditional security studies look at the security through the national security lens. Sovereignty and integrity of the State are the loci and focal points. Cold war and the literature before his work zeroed in on the weapons, disarmament, increasing the deterrence to shield the State from other States. In order to fructify and protect the State, traditional security studies also encompassed the idea of making pacts, alliances and treaties between various States. To sum up, Holmes (2014), Morgenthau & Thompson (2006), Wolfers (1952), Bhonsle (2015) and Nihas (2020), in their perspective views, articulated that the main concern and ultimate goal of the State is about power and maintain their national security stable and gain the maximum spectrum of national interests. The military power linked strongly with the national security. The States are guided in their relationship with other States by the logic of national interests, national security in the terms of power, also the national interests and national security are synonymous. All States are regarded as sharing the same concern of maximizing power for the sake of their own security. Moreover, in their views, the State is very important, the top in the priority agenda, and, to whatever cost, it should ensure the safety of the State and protect it by using all military means.

According to Jackson-Preece (2011), security is a fundamental value of human life. As Thomas Hobbes stated, "there is no place for industry, no arts, no letters, no society without security, and, which is worst of all, continual fear, and danger of violent death and the life of man, solitary, poor, nasty, brutish, and short" (Newey, 2008). In the same views, Walt (1991) mentioned that the security studies may be defined as the study of the threat using and controlling by military force. It explores the conditions that make the use of the force more likely, the ways that use of force affects individuals, State, and societies and the specific policies that States adopt in order to prepare for, prevent, or engage in war.

Tadjbakhsh (2005) wrote that the simplest definition of security is "absence of insecurity and threats". To be secure is to be free from both fear (of physical, psychological abuse, violence, persecution, or death) and from want (of gainful employment, food, and health). Human security, therefore, deals with the capacity to identify threats, to avoid them when possible, and to mitigate their effects when they do occur. It means helping victims cope with the consequences of the widespread insecurity resulting from armed conflict, human rights violations and massive underdevelopment. This broadened use of the word

“security” encompassing two ideas: one is the notion of “safety” that goes beyond the concept of mere physical security in the traditional sense, and the other the idea that people’s livelihoods should be guaranteed through “social security” against sudden disruptions.

Williams (2020) argued about the importance of a government to the citizens in a crisis like the outbreaks of COVID-19 pandemic; he stated that Hobbes believed that government’s prime responsibility is ensuring the safety of citizens’ lives (Newey, 2008). However, Taylor (2004) had argued that traditional State centered security reached a peak during the Cold War. For forty years, the major world powers entrusted the security of their populace, and to a certain extent of the world, to a balance of power among States. With the fall of the Berlin Wall, it became clear that despite the macro-level stability created by the East-West military balance of the Cold War, citizens were not necessarily safe. They may not have suffered from outright nuclear attack, but they were being killed by the remnants of proxy wars, environmental disaster, poverty, disease, hunger, violence and human rights abuses. Ironically, the faith placed in the realist worldview, and the security it provided, masked the actual issues threatening the individual. Being the central foci of security, the protection of the person was all too often negated by an over-attention on the State. By allowing key issues to fall through the cracks, ‘traditional security’ failed at its primary objective: protecting the individual (Taylor, 2004). This led to the challenging of the notion of traditional security by such concepts as cooperative, comprehensive, societal, collective, international and human security (Smith, 1997).

Realists failed to anticipate the end of the Cold War, which put ‘realism and realists’ on the intellectual defensive. Threats and vulnerabilities can arise in many different areas, military and non-military, but to count as security issues they have to meet strictly defined criteria that distinguish them from the normal run of the merely political. They must be staged as existential threats to a referent object by a securitizing actor who, thereby, generates endorsement of emergency measures beyond rules that would otherwise bind. The clearest statement was made by Walt (1991) in his article on the state of the field security studies, broadening the concept of security (Buzan, 1983).

The concept of security has for too long been interpreted narrowly: as security of territory from external aggression, or as protection of national interests in foreign policy or as global security from the threat of a nuclear holocaust. It has been related more to nation-States than to the people. The superpowers were locked in an ideological struggle – fighting a cold war all over the world. The developing nations, having won their independence only recently, were sensitive to any real or perceived threats to their fragile national identities. For many of them, security symbolized the protection from the threat of disease, hunger, unemployment, crime, social conflict, political repression and environmental hazards. Human security is not a concern with weapons – it is a concern with human life and dignity. Human security is people centered, first, embodying a safety from such chronic threats as hunger, disease and repression. And second, it means protection from sudden and hurtful disruptions in the patterns of daily life – whether in homes, in jobs, or in communities (UNDP, 1994).

From this statement, the UNDP (1994) presented the debate about the narrowing and widening the concept of security, the realist theory looks to the national security as to build up the maximum military capability to deter any threats, it focusses only on the survival of the State and do not give a concern to the individuals in the territories of the State. As UNDP (1994) mentioned, human security not only links with superb military capabilities but its moves far beyond of that to the security of individuals from various non-military threats affecting their lives and survival.

While Buzan (1983), argues that; the States become the mechanism by which people seek to achieve adequate level of security against social threats. Buzan, stated that the definition of national security, set by the Thomas Hobbes (Newey, 2008), is as, the people find States in order to defend them from the invasion of a foreigner. The great achievement of men is, putting themselves under government for preserving their property. Buzan (1983) agrees that the concept of national security was dominated by the thoughts of realist to defend the territory of the State from any enemies. Buzan (1983) underlies common voices to expand the notion of security and the meaning of security bound to the level of State, which is inadequate. From this point of views, Buzan (1983) pushed to cementing his position paving to broaden the concept of security. He also argues that due to the concept of security was dominated for long time by the realist, it led to wars. Another reason is the increased debate amongst IRSS scholars to re-defining the concept. He argues that there is a relationship between individual security and State security. Hough (2008) argues that when national security is defined negatively, as protection against outside military threats, the sense of threat is reinforced by the doctrine of the State sovereignty, which

strengthens the boundary between a secure community and a dangerous external environment. For this reason, many critics of realism claim that if security is to start with the individual, its ties to State sovereignty must be severed (Hough, 2008). Buzan (1983) and Hough (2008) agreed that the national security concept has to be clear, meaning that what should we put in our mind when we define the national security is only the State, the individuals or both of them, because if the concept is not clear there will be a consequence.

Buzan (1983) made obvious argument about the national security and individual security. He stated that security is a relative concept, it is much easy to apply to things than to people. Security for individuals cannot be defined so easily. The factors involved are- life, health, status, wealth and freedom. Many of them cannot be replaced if lost. It is useful to discuss security in relation to specific threats such as diseases, poverty and natural disasters. Also, individual's security moves to social threats, physical threats (pain, injury, death), economic threats (destruction of property, loss jobs). From this views, Buzan (1983) goes so far as to define the five security sectors that affect human collectivities: military security, economic security, environmental security, societal security and political security (Buzan, 1983).

Health security is an important dimension of human security, as good health is “both essential and instrumental to human survival, livelihood and dignity” (Human Security Unit, 2013). Martin (2017) stated that the significance of health and its influence on human security can be estimated on the fundamental of four factors:

1. The scale of the disease burden now and in the future
2. The urgency for action
3. The depth and extent of the impact on society
4. The interdependencies or “externalities” that can exert ripple effects beyond particular diseases, persons or locations.

By putting these factors to health security, three fundamentals' threats to human security were recognized: Poverty-linked to threats, global infectious diseases, crisis and violence, conflicts and natural disasters. JICA (2006), found that the problem of poverty, is multifaceted, involving several dimensions, including the absence of capital investment, crippling debt, disease and ill-health, political instability, lack of education, ecological degradation, and inappropriate technology. He argued that the human security gets more attention due to globalized diseases, contemporary epidemics and pandemics. The movement of people, goods and trade between countries led to increased infectious diseases and pandemics. In the past, the State was the traditional focus of foreign, defense and security policies, and national security was understood as dealing with the protection of the State and its vital interests from attacks by other States.

Williams (2020) illustrated the link between health and security as shown in the table 1. He stated that the relationship between health and security have been both a direct result of conflict and indirect causes of health problems. Refugee flows lead to spread of infectious diseases. In the nineteenth century, as trade between Europe and the rest of the world increased, the risk of infectious diseases being brought into Europe from elsewhere. He argues about how to consider a health as a security issue, the first one is the growing acceptance to broaden the meaning of security during 1990. The second factor is the human agency. A member of prominent individuals used their positions of power and influence to place health on the foreign and security policy agenda. The third, the infectious diseases spread fast due to globalization. The new diseases include HIV, SARS and H5N1, which spread through movement of goods and people.

According to Mahoney-Norris (2019), the consequences of a changed security environment are profound for every people. In the past thirty years' security concerns was circulated upon human security matters, such as crime, poverty and diseases. The security concerns overwhelmingly encompass contrasting views about issues, threats and actors which are reflected in the variety of ways in which the United States maintain the stability of its national security today. Mahoney-Norris (2019) established a framework considering the best way to realize human security groups, States, and individuals by examining the continuum of interconnected issue areas, they conceptualize in specific chapters as identity security, civic security, economic security, environmental security, maritime security, health security, and information security.

3. THE COVID-19 PANDEMIC AND THE IMPORTANCE OF STATE

Based on the figure 1, the State is like a house, and in this house, there are elements that must be kept as top priority to ensure that the house is safe and protracted from any threat. As in politics and security studies, the core of State is: national security, national interests, sovereignty and safety of the citizens. Those four elements are like a chain, if one of them faces any vulnerability at any level, this will ultimately be affecting the chain in its core. The role of the State in this course, is to deter and eliminate such threat or vulnerability as quickly as possible, using all available means, regardless of the price involved. People look to the State as the main actor to maintain their safety.

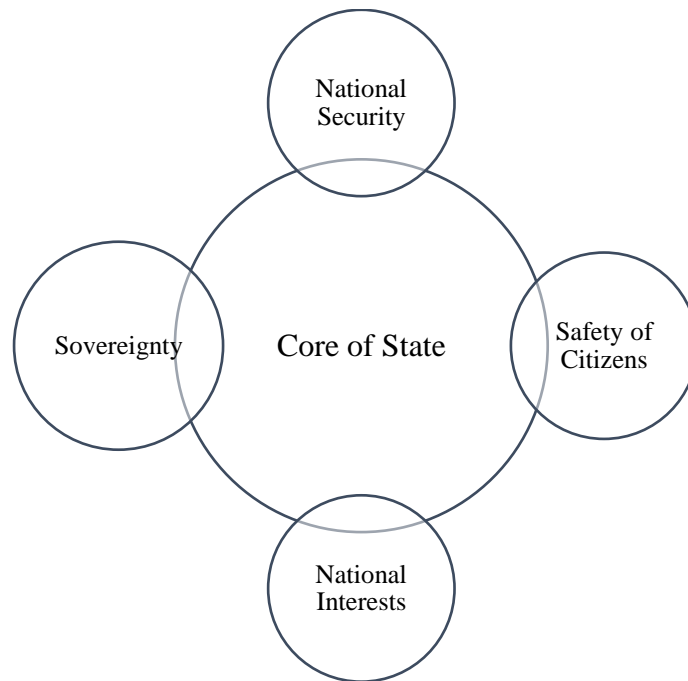


Figure 1: Core of State

In Oman, the government has been taking a serious action to deal with this virus from the first day. It takes full responsibility to secure the health of their citizens, provide all medical care needed and law enforcement to maintain security and stability. Therefore, the Omani government presents a comprehensive and powerful policy to curb the spread of the COVID-19 under a national supreme committee, take its task under supervision from His Majesty Sultan Haitham. Such policy reflects the concept of securitization theory. History told that, the State power and capability remain invisible unless the State feels that it endangered. Consequently, the State will act with full power to defend itself and their people with ultimate responses. The COVID-19 pandemic reaffirming the importance of the State and central decision making, States around the world presented an extraordinary measure in order to protect the lives of their citizens. From this point of view, State presided to maintain the stability of its national security and the safety of the people.

3.1 Securitization Process in Oman

Figure 2 shows how the securitization process in Oman began implementation to curb the spread of the virus. In securitization process, the government and audience were involved toward a certain aim that fighting the virus and the outcomes are beneficial for both of them.

The study circulated upon the figure, the inputs, the COVID-19 pandemic outbreaks in Oman, analyzes the implications on the health and economic system, presents the government actions to contain the virus, and shows the reaction of audience. The outputs investigate how the Oman model managed to deal with this virus maintaining the national stability, government capability in crisis management, how this reflects to cement its good reputation in international arena and various lessons toward enhancing the national health security.

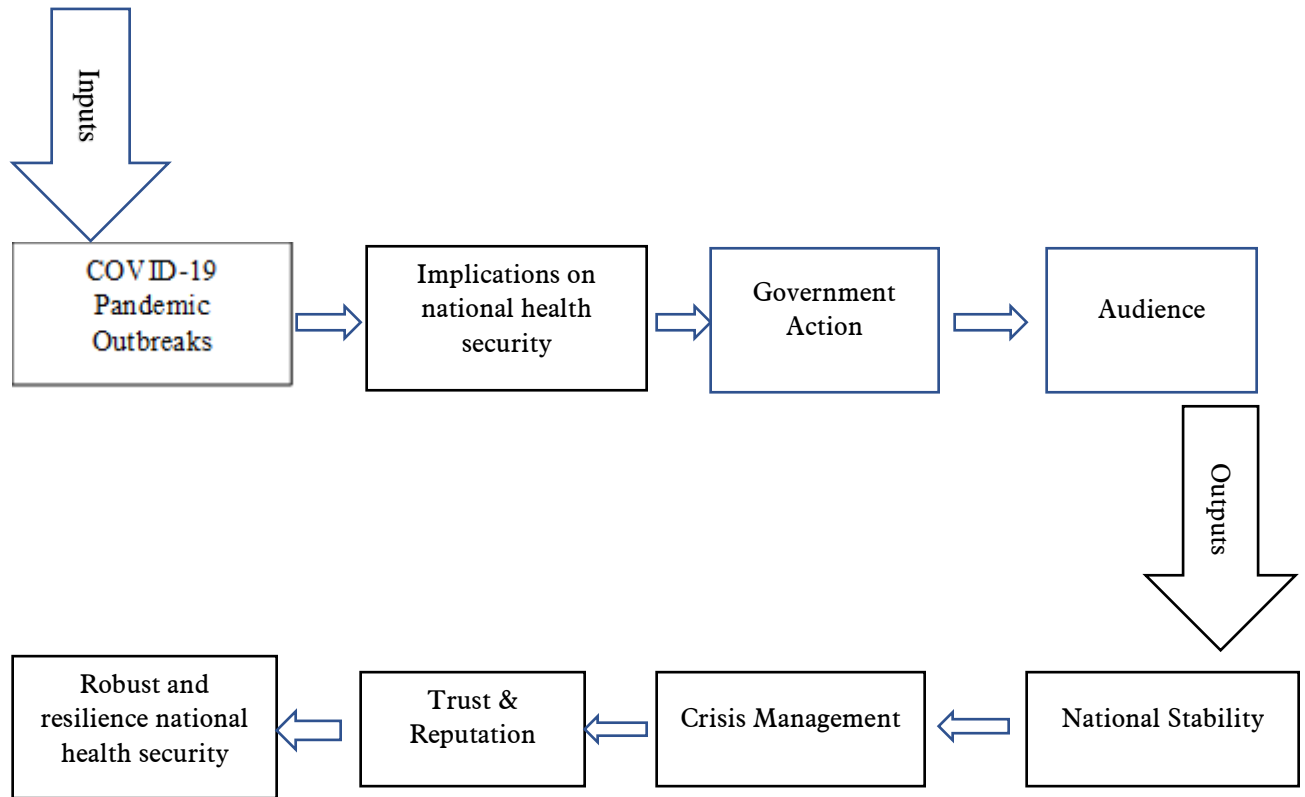


Figure 2: Securitization Process in Oman

3.2 The Sultanate of Oman Securitization Approach

Based on figure 3, COVID-19 is an existential threat to Oman. The government has taken an obvious and significant extraordinary measure to fight the virus. All those measures and deployment of forces presented by the government was to secure the lives of citizens and maintain stability across the country. On the other hand, the audiences (citizens or residents) have been accepting these extraordinary measures and cooperated with the government in applying them for their safety first and to help the government overcome this virus.

From the Westphalia agreement 1648 people are expecting from the government as the referent object to preserve the acquisitions and capabilities and preserve the national security. It considers the military capability as the key point to preserve the national security and stability of the country. On the other hand, citizens are looking to the government as the entity that protects them from any threat, either external or internal threats. Since then, until now, the government is still very crucial to the community and the people. It is right that some governments are not totally perfect, and there are many deficiencies and weaknesses in the governments' obligations, but the core of the government and its value remain important to protect the people and protect the territorial integrity.

Since the difference of opinions and different point of views of the community, and incapability to reach one decision in a time where fast decisions should be made. Also, the community interests are way difference since everyone is looking to their own interest from economic and social angles. Government is dealing with non-military threat to protect the national security and the individuals. Nowadays, citizens anticipate daily decisions from the government whether it is lockdown, closing market, or affecting the citizens financially by decreasing the workers or closing businesses. It is like waiting for a war with invisible enemy. These steps lead us to the result that the normal way of politicians to manage the country and their decisions could lead to right decisions as much as wrong decisions, and this is considered as human error. Some citizens were blaming the government and mistrusted the politicians by the wrong decisions. With COVID-19 pandemic, citizens believe that the governments are essentials, especially when there are threats to the people. At the end, the individual chooses whether to live in a government with law and order and

security system to protect its citizens and the country or lives in isolated place with jungle mindset where the strongest predator on the weakest prey. The second part of the argument is that, after the Cold War, to broaden the concept of security beyond the military security threat, scholars including Barry Buzan (1983) moved to include non-military threat that people face. From that time until now, there are critics to national security expansion to encompass non-military threat.

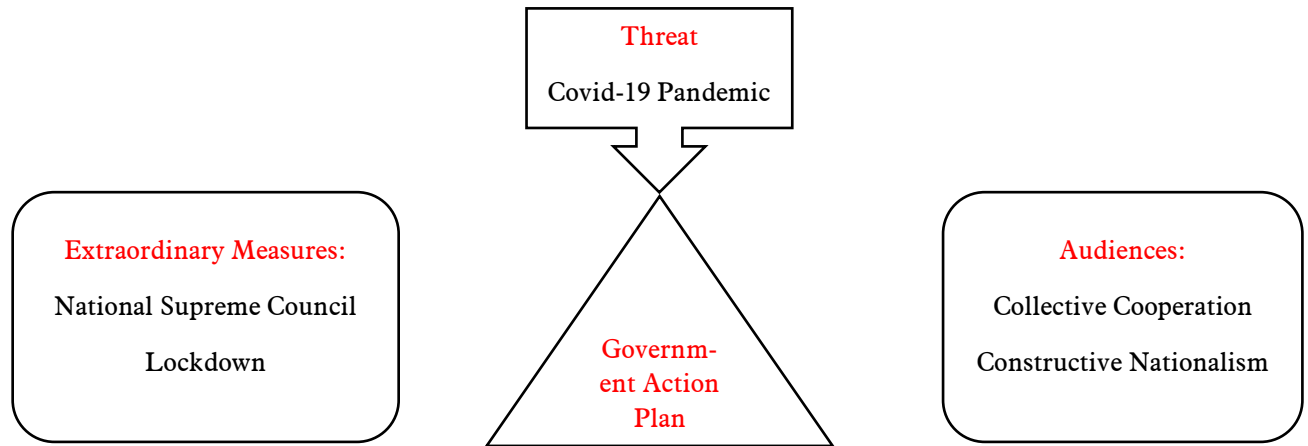


Figure 3: The Sultanate of Oman Securitization Approach

In Oman, people are not isolated from the rest of the world. So, these non-military threats affect people, especially the COVID-19 pandemic. The government role was effective and has observed to deal with non-military threat. The establishment of the supreme committee led by His Majesty the Sultan of Oman is to ensure that the COVID-19 is the real threat to the citizens. Added to this, many decisions have been made like the lockdown, prohibiting social gatherings, closing down malls, and decreasing the number of workers in government sector. These decisions' main reason is to protect the national security of the country, protect the community and the citizens. The citizens are looking with trust to the government to the decisions made to protect the people from the outbreak of COVID-19. This will increase the importance of the government to ensure the safety of the people and the consequences of the crises. The government showed importance to the national medical security to play significant role as a weapon to face this invisible enemy. The government provided financial resources and showed high importance and unconditional support to the medical sector. The government will double their benefits during the outbreak of COVID-19, the citizen's faith put to the government to protect them from this threat, and after the end of the crisis, the citizen will trust the government more as they will be a part of the solution and the recovery process. By this, if any blame comes, the government and the community will share the pardon, and, instead of blaming each other, they will work side by side to find other solutions to any non-military threats.

When the citizens start to be a part of the government, they will start to trust the government more in health, national security and economic sector. This will reinforce the importance of the government to deal with non-military threats. When citizens understand that the government is on their side even during the current COVID-19 crisis by limiting the economic consequences of the citizens, this will increase the national security system in the country due to trusts in the government decisions. Also, it will eliminate any external political threat to divide the citizens and encouraging them against the government.

4. RESEARCH METHODOLOGY

The study primarily focuses on investigating the impact of COVID-19 on Oman national health security and what areas require improvement to pave a robust and resilient national health security system. The study applied qualitative method. The first stage of the research was carried out and the activities were limited to the Ministry of Health in Oman, medical crews working in the frontlines fighting the virus. The online survey was conducted with medical crews in the frontlines fighting the

COVID-19, while interviews were taken from selected decision makers and management in the Ministry of Health in Oman. The study attempts to present the impact of COVID-19 on Oman national health security. The second stage was targeting the senior management in the Ministry of Health in Oman, it was implemented through online interviews using questions derived from the questionnaires' results of the first stage.

The population of the research involves the medical workers working in the frontlines fighting the virus. The questionnaires were disseminated, and sampling was carried out to get medical workers acting as respondents of the research. The sample parameters are based on how the participants are engaged and to which extent they would become aware the COVID-19 impact on national health security. Overall, more than 100 responses needed to be gathered from a sample of 1,000. The questionnaire survey was determined depending on the research objectives. The domain of questions intended at addressing the compound agents related to COVID-19 impact on national health security. Researcher used Google Forms to prepare the questionnaires and recorded in Google Spreadsheets. The data collected from the questionnaire were easy to be analyzed using several computer software like SPSS (Almawli, 2020). Interviews and online questions were the data collection instruments used to collect the data. For the interviews, open-ended questions were implemented to get data from the participants. The information collection for interviews by email responses were implicit. The parameters for choosing the interviewee embrace the level of senior management in the Ministry of Health in Oman. A total of 10 interviews were conducted.

5. RESULTS AND DISCUSSIONS

Stage I: Questionnaire Survey Analysis

5.1 The Impacts of Covid-19 on Oman's National Health Security: An Analysis

This study was set out to: 1) Determine the relationship between COVID-19 and national health security in Oman; 2) Investigate the impact of COVID-19 on national health security, and 3) Identify the role of government in mitigating the impacts of COVID-19 on national health security. Each objective (herein called as subscale) had a set of questions collecting data to answer the objective. Therefore, this part presents the tests of internal consistency (Cronbach's alpha) within items in each subscale. This is then followed with the data analysis per objective.

5.2 Reliability test results for each objective or subscale

The study had 3 objectives or subscales, each with a number of questions. The inter-question reliability within each subscale was assessed using the Cronbach's alpha (α). The Cronbach's alpha, which is a measure of the internal consistency of all the items in a multi-item scale, is derived as shown below (Cohen et al., 2007):

$$\text{Alpha } (\alpha) = \frac{nrii}{1+(n-1)r_{ii}}$$

Where n = the number of items in the subscale (or objective) and r_{ii} = the average of all the inter-response correlations within the objective. Cohen et al. (2007) consider a coefficient alpha of $\geq .70$ acceptable. As shown in table 1, the 7 items in objective 1 yielded a Cronbach's Alpha of $\geq .70$. Therefore, the questions in the objective had internal consistency with each other, and so all of them usefully contributed to the overall objective. Similar conclusions were reached in objectives 2 and 3.

Having assessed the reliability of the questions in each objective, the next step is to analyze and present the actual findings for each objective. The data whose findings are presented in the following subsections was collected from 56 medical crew in the Sultan Qaboos University Hospital. An online survey or questionnaire was administered to these officials. The statements in the questionnaire were circulated around the three objectives of interest. In that order, presented below is the analysis, presentation and interpretation of the findings.

5.3 Relationship between COVID-19 and national health security in Oman

In this objective, the medical crew were asked how they feel about the relationship between COVID-19 and national health security in Oman. There were 7 statements relevant to this objective (labelled 01-1 to 01-7). Overall, as shown in table 2, the medical crew felt that there was a very strong link between national health security and COVID-19 pandemic (Mean=4.3852, 0.74948).

Table 1: Descriptive statistics for each objective as well as the Cronbach's Alpha within every objective

<i>Objective (Subscale)</i>	<i>Descriptive statistics</i>						<i>Cronbach's Alpha</i>
	<i>N of items</i>	<i>Mean</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Range</i>	<i>SD</i>	
<i>Objective 1</i> To determine the relationship between COVID-19 and national health security in Oman	7	4.385	4.143	4.536	0.393	0.7495	0.935
<i>Objective 2</i> To investigate the impact of COVID-19 on national health security	6	4.274	3.911	4.482	0.571	0.7624	0.891
<i>Objective 3</i> To Identify the role of government in mitigating the impacts of COVID-19 on national health security	14	4.066	3.768	4.446	0.679	0.7996	0.949

Table 2: Descriptive statistics for objective 1

<i>Statement</i>	<i>N</i>	<i>Range</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>		<i>Std. Deviation</i>
	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Std. Error</i>	<i>Statistic</i>
O1-1	56	4	1	5	4.43	0.116	0.871
O1-2	56	4	1	5	4.23	0.122	0.914
O1-3	56	4	1	5	4.48	0.114	0.853
O1-4	56	4	1	5	4.54	0.111	0.830
O1-5	56	4	1	5	4.43	0.114	0.850
O1-6	56	4	1	5	4.45	0.117	0.872
O1-7	56	4	1	5	4.14	0.131	0.980
Overall Score Objective 1					4.3852	0.10015	0.74948

Each of the individual statements attracted scores above 4 (See Figure 4), suggesting that the respondents believed all the issues under consideration affected national security significantly. However, despite the fact that all issues were relevant to national health security, the respondents felt that the following were at the top of the list: O1-1 There is a relationship between COVID-19 and national health security, O2-1 The COVID-19 create a national security dilemma, O1-3 The COVID-19 pandemic has reinforced the importance of establishing a national health security system, O1-4 Security stability depends on the presence of a health system prepared to deal with epidemics, O1-5 Health preparedness is key in national security stability, and O1-6 The efficiency of the health system and the management of epidemics and emergencies reflects the security situation positively or negatively. However, the following issues were placed at the bottom of the list of those issues connected to national health security, O1-7 COVID-19 has created a state of internal and external security instability. This can be interpreted to mean that although COVID-19, is significant in national health security stability of the Sultanate of

Oman, the respondents felt that, at the moment, the pandemic has created a threat it poses to national health security is significant.

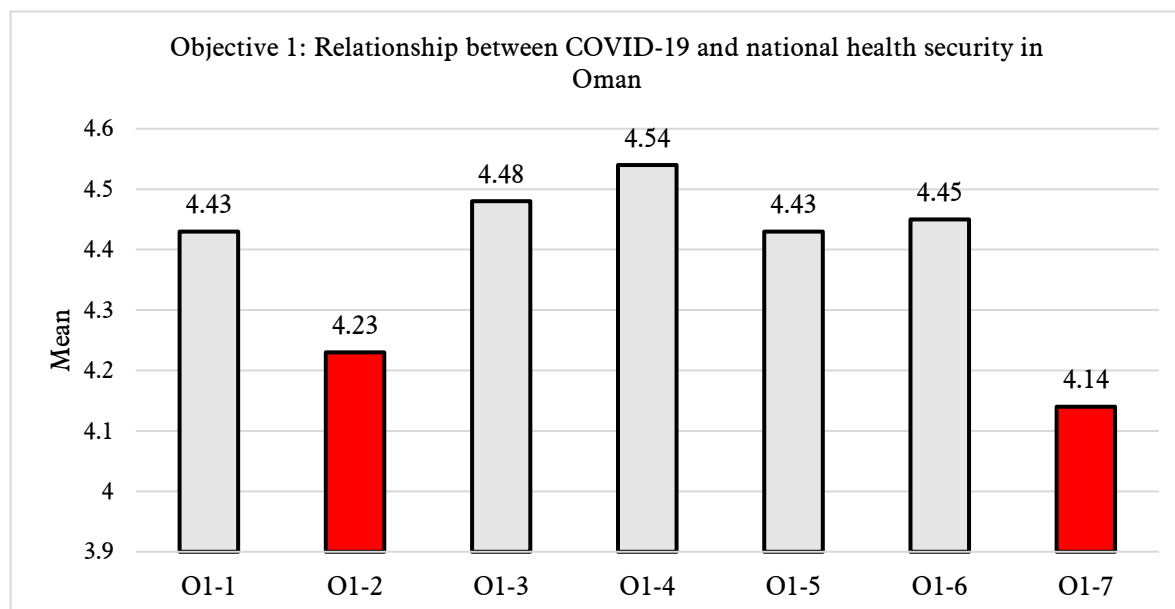


Figure 4: Relationship between COVID-19 and national health security in Oman

5.4 Impact of COVID-19 on national health security

In this subscale, the respondents were asked to express their views regarding the impact of COVID-19 on different aspects of the social and national health security in Oman. Generally, as shown in table 3, the respondents felt that COVID has had a huge impact on national health security, (Mean=4.2738, SD=0.76239).

Table 3: Descriptive Statistics for objective 2

Statement	N	Range	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
O2-1	56	4	1	5	4.48	0.119	0.894
O2-2	56	4	1	5	4.43	0.114	0.850
O2-3	56	4	1	5	4.46	0.114	0.852
O2-4	56	4	1	5	4.18	0.125	0.936
O2-5	56	4	1	5	4.18	0.144	1.081
O2-6	56	4	1	5	3.91	0.140	1.049
Overall Score Objective 2					4.2738	0.10188	0.76239

Specifically, the respondents picked the following three areas as the most affected by the pandemic (See Figure 1). O2-1, It has created a difficult economic situation that has affected all groups in society, O2-2 It has led to the loss of many jobs and social security in society, and O2-3 It has affected the actual preparedness of medical and health personnel in the Sultanate of Oman. On a positive note, most of those surveyed agreed that. On the other hand, O2-4 the existence of adequate financial resources contributes to the speed of treatment of COVID-19, and O2-5 existence of real investment in the health sector contributes to dealing with emergencies and epidemics, they not as much agree with statement. A significant portion of the medical crew felt that centralizing a single system of decision making has not at that much helped in dealing with COVID-19 (See the mean score to the statement: O2-6 Creating a single system has helped centralize decision-making for dealing with COVID-19).

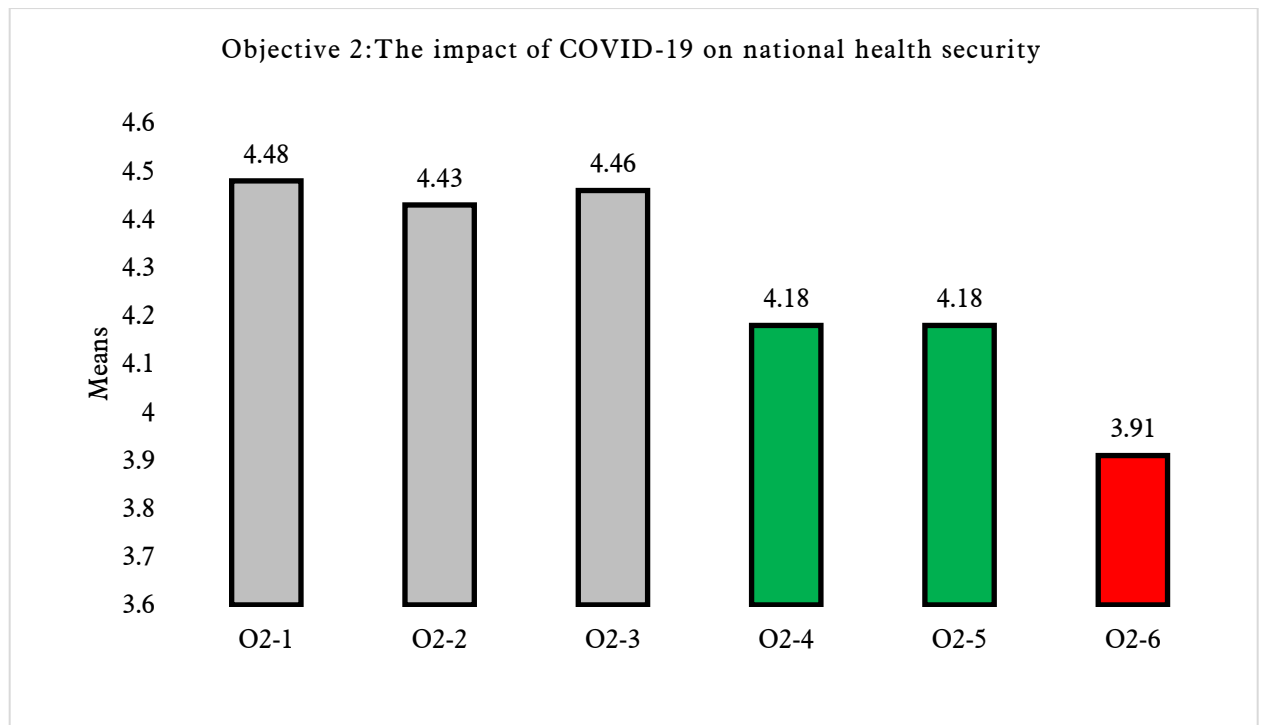


Figure 5: The impact of COVID-19 on national health security

5.5 Role of government in mitigating the impacts of COVID-19 on national health security

This subscale evaluated the role of government, and other interconnected sectors such as media in fighting the COVID-19 pandemic. There was consensus (Mean=4.0663,1 SD=0.79957) that these sectors play a significant role in fighting the pandemic (See Table 4).

Table 4: Descriptive statistics for objective 3

<i>Statement</i>	<i>N</i>	<i>Range</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>		<i>Std. Deviation</i>
	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Statistic</i>	<i>Std. Error</i>	<i>Statistic</i>
O3-1	56	4	1	5	4.45	0.114	0.851
O3-2	56	4	1	5	4.23	0.114	0.853
O3-3	56	4	1	5	4.00	0.132	0.991
O3-4	56	4	1	5	4.21	0.124	0.929
O3-5	56	4	1	5	4.16	0.132	0.987
O3-6	56	4	1	5	4.09	0.128	0.959
O3-7	56	4	1	5	3.95	0.131	0.980
O3-8	56	4	1	5	4.09	0.151	1.133
O3-9	56	4	1	5	3.88	0.142	1.063
O3-10	56	4	1	5	3.88	0.157	1.176
O3-11	56	4	1	5	4.04	0.165	1.235
O3-12	56	4	1	5	3.91	0.143	1.066
O3-13	56	4	1	5	3.77	0.157	1.175
O3-14	56	4	1	5	4.29	0.129	0.967
Overall score Objective 3					4.0663	0.10685	0.79957

Taking into account the specific areas, those surveyed in concurrence with the following statements touching on government and allied sectors are highlighted in figure 6. O3-1 The involvement of all the competent authorities in the pandemic crisis promotes constructive and effective management

of the emergency, O3-2 Periodic monitoring and extrapolation of the spread of COVID-19 has enabled proactive decisions to be taken to monitor the health and security situation in the Sultanate, O3-3 The media have helped to create a healthy awareness in society, O3-4 Continuous communication with the community creates transparency and involvement to ensure the participation of all in the implementation of decisions, O3-5 The awareness bulletins have helped to raise the society's culture of health safety, and O3-6 Creation of a system of social solidarity has contributed to the creation of health and economic security in the Sultanate's society. Further, the following aspects received relatively higher ratings as well (signifying strong agreement with the statements): O3-8 Promoting scientific research and health studies contributes to dealing with crises and epidemics, O3-11 The recruitment, continuous training and qualification of medical personnel are helping to tackle the pandemic, and O3-14 There is a need to establish a national health security center to develop plans and strategies to deal with health crises.

Conversely, there are issues that attracted the least scores in this objective, implying that a considerable number of the respondents did not agree with the statements. These are: O3-7 The coherence of Omani society and the sense of responsibility of government decision-makers in the face of COVID-19 have helped ensure the safety of Omanis, O3-9 Through the ongoing support and monitoring of public health, decision-makers demonstrate their commitment to manage and mitigate the impacts of the crisis, O3-10 The equitable distribution of medical personnel, equipment and the decentralization of services have helped health facilities focus on the fight against COVID-19, O3-12 The optimal use of human and financial resources to deal with the COVID-19 has reduced the strength of its impact, and O3-13 The government has succeeded in managing the crisis.

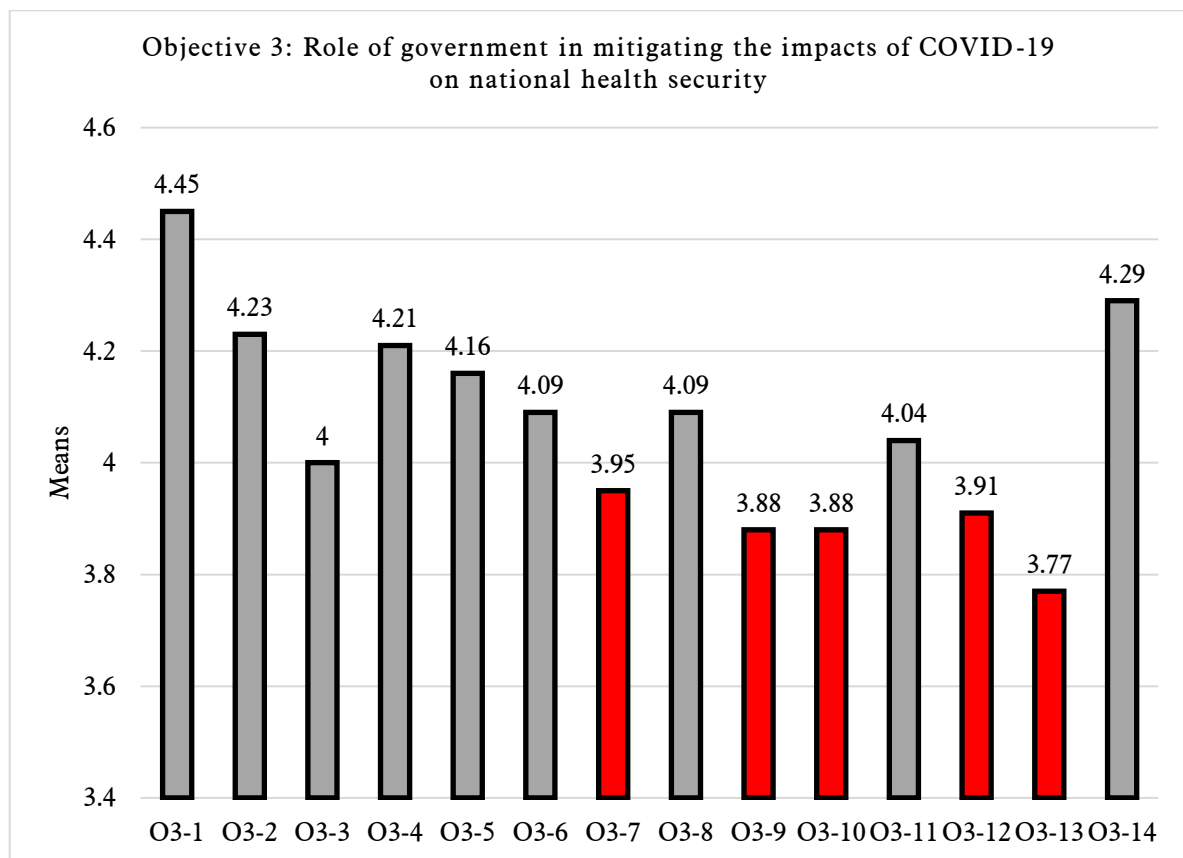


Figure 6: Role of government in mitigating the impacts of COVID-19 on national health security

5.6 Summary of the findings

An online survey was administered to medical crew members at the Sultan Qaboos University Hospital. From the data gathered, the study can now provide a summary of the perception of 56 crew members who responded to three key questions that were the basis of this inquiry: 1. What is the relationship between the COVID-19 pandemic and the National Health Security of Oman? 2. What is the

impact of COVID-19 pandemic on the Sultanate of Oman National Health Security? 3. To what extent has the government and the allied sectors played their roles in mitigating the impacts of the COVID-19 on National Health Security of the Sultanate of Oman?

With regards to the first question, most of the respondents felt that COVID-19 and National Health Security are intertwined, reinforcing the need for establishing a strong national health security system ready to deal with such crises. The crew further contended that the efficiency of the health system and the management of epidemics and emergencies reflects a country's security situation positively or negatively. However, the crew felt that the uncertainties arising from the pandemic and threats of COVID-19 to national health security and stability is currently of such a huge magnitude issue to the government.

In respect of the second objective, the medical crew agreed that the COVID-19 has had significant impact on various spheres of social and national health security of The Sultanate of Oman. The greatest harm was associated with loss of jobs and the distraction of the preparedness of the health workers in providing healthcare services to the citizens of the Sultanate of Oman.

In the third objective, concerning the role of government and the allied sectors in the fight against the COVID-19, there was unanimity among the crew that these sectors are crucial in the effective management of such crisis and emergencies. Among others, the crew pointed out regular monitoring of the pandemic patterns, the media campaigns against the pandemic, continuous bulletins and updates to community, as well the spirit of solidarity among the Oman citizens as having played key role in the fight against the COVID-19. On the other hand, there was a feeling among a significant number of respondents that the coherence and sense of responsibility among government decision-makers in the fight against the pandemic had some gaps. Moreover, some respondents had doubts about the commitment of government decision-makers towards managing and mitigating the impacts of the crisis. Additionally, there was a perception among a good number of respondents that the distribution of medical personnel, equipment and services was equal which help fight the pandemic.

Stage II Analysis

The second stage of this research included interviews with three senior management staff in the Ministry of Health in Oman, one Omani politician and one Omani from *Shura* Council¹. The interview questions were focused on the COVID-19 and national health security, impact of COVID-19 on national health security, the role of the government in mitigating the impact and the lessons learnt from this crisis, the ways to a robust and resilient national health security system. The interview stage delves into finding ways on the form of recommendations to establish a national health security policy.

The interviewees were asked about the impacts of COVID-19 on Oman national health security, most of the responses agreed that the COVID-19 has had impacts on national health security in Oman. The huge number of cases in Oman cause deficit of health institutions especially in the intensive care units, that included the high demand for oxygen, medical supplies and devices, and medical crew. The major difficulty was coping with economic fall down caused by the lockdown of the societies and stopping delaying with trade line. Many small to medium businesses faced bankruptcy in Oman due to the COVID-19 lockdown.

5.7 Management's commitments to the importance of establishing a national health security center:

The second area of discussion was about how to improve the national health system. They stated that, one major lesson learned from this pandemic is that it could happen again. The idea of establishing a national health center is a necessity in coming years. The main role of the national health center is to carefully observe and to act fast to prevent any outbreak affecting the health of the society. Also, there should be a research department that searches for vaccines for any potential disease or try to improve the vaccines that we have now. In addition, the national health center must be under the responsibilities of

¹ Majlis A'shura is elected by the people. It is a financially and administratively independent institution. It is the lower house of Oman Council which enjoys legislative and oversight competences. It aims to serve the country and the nation and participate in the development march. Majlis A'shura consists of members who are representing the different Wilayats of the Sultanate elected by direct secret ballot. The Wilayats shall be represented by two members if the number of its population exceeds 30 thousand and by one member if the population is less than 30 thousand. The membership term shall be four Georgian years. The Chairman and his two deputies are elected from the members. For more information on Majlis A'shura Oman, refer to <https://www.shura.om/About-Us/About-the-Majlis>.

the Ministry of Health in Oman and working in under their regulations. National health security center is very essential, establishing one should be the main lesson from COVID crisis in Oman. Its scope will include all concerned parties from the government similar to the supreme committee now and will be responsible to formulate all the policies related to the crises and responsible to maintain resources needed and should have the authority to mobilize resources between hospitals.

5.8 Management's commitments to the role of the government in mitigating the impact of COVID-19 on national health security:

The first month with the outbreak of COVID-19, the high commission in Oman was established under the direct responsibility of His Majesty the Sultan of Oman. The high commission meet weekly for briefing and finding solutions to slow down the outbreak of COVID-19 in Oman. During the first wave of COVID-19 the Supreme Committee succeeded in dealing with the outbreak of COVID-19, but the strict decisions such as lockdown, closing restaurants and malls, not allowing social gatherings, could have been made faster. In this drastic time, strict decision should be forced on the society to prevent the situation from becoming worse. To stop the outbreak in Oman-knowing as a social community - strict decision must be taken to stop any gathering or social visiting between friends and family members.

The major decision was closing the shopping centers, malls, any social activities, and half lockdown. The decisions were focused on preventing any gathering of people at crowded places and always keeping two-meter distance. Also, forcing the wearing of gloves and masks while shopping or at workplaces. These decisions helped stop the mitigation of COVID-19 by limiting the contact of people. In addition, the government limited the workers in government sectors by 30%, 50% only, and established policies and regulation to coming to work or dealing with visitors at social services places.

5.9 Management's commitments to the role of the media in the crisis:

The awareness of the risk and the nature of COVID-19 was the priority in Oman. Media was without any doubt the way to raise the awareness of society. In Oman, the national channels, the SMS services, social media, and the government briefings were all aiming to raise the awareness of society of the risk and danger of the COVID-19. The ministry of health gave the society daily briefing of the outbreak of COVID-19 and the number of cases, and the areas where the major cases are recorded. This information helps make people in Oman aware about the risk of this crises and how to limit the way to get infected by this virus.

5.10 Management's commitments to the lessons learned from this crisis and what are the recommendations for dealing with such crises:

The lesson learned is that the people need to prepare better for any world health crises like COVID-19. The national health center should be established in Oman, and it should be prepared for any similar pandemic with the right resources to preparing vaccinations and studies with any potential health risk globally or locally. The major cause of the outbreak of COVID-19 was the lack of information and knowledge about the virus and the separation ways of the virus. With the right information and transparency of the fact between health organization and governments, dealing with any upcoming pandemic will be better and faster, this will result in less cases and less fatalities. It must be prepared in the future to face such a pandemic, as we all saw at the beginning of the pandemic that we faced difficulty in providing the tools and tests necessary to confront the disease, and we must also find a way to accommodate groups who are unable to quarantine home in institutional quarantine. There is an urgent need to include medical education in pre-university curricula and during university studies, to ensure awareness and promote community health, as there is a gap between medical education in educational institutions and clinical practices in health institutions.

The Sultanate is still dependent on abroad and on importing most of its needs of medicines, serums and other medical supplies. Oman does not have yet a real industry for medicines. Indicators and figures issued by the Ministry of Health show that the proportion of personal spending and the private sector's contribution to health does not exceed 20% of public spending, while it reaches Government support for this sector has reached 80%, and the pharmaceutical industry in the Sultanate is very weak, still importing some medicines and equipment.

Oman still imports 95% of medicinal products and surgical instruments and 100% of laboratory instruments, as local factories produce only about 5% of the total medicines in circulation in the

Sultanate. There are currently only four factories in the Sultanate for the production of medicines, one to produce raw materials and one to produce pharmaceuticals in its semi-finished form, and two factories to produce finished medicines. With regard to the medical and pharmaceutical products industry, represented by medicines, surgical instruments, medical devices, and laboratory tools, it is considered limited, as it accounts for only 5.6% of the size of the pharmaceutical market in the Gulf Cooperation Council countries², which amounts to \$ 8.5 billion. These indicators show that Oman really needs to encourage investment in this very important sector. Packages of facilities that attract local and foreign investors specializing in establishing pharmaceutical factories, drugs and other medical preparations should be provided to the Sultanate in order to cover the Sultanate's needs for these products and to export part of them.

The pharmaceutical industries sector is one of the targeted sectors because of its utmost importance to achieve drug and health security in the Sultanate, indicating that the pharmaceutical industry in the Sultanate will open horizons that will enhance trade exchange in the sector, supporting the growth of the national economy and benefits to the entire industrial sector. The COVID-19 crisis has become a threat to the health security of the citizen and residents, and it has formed the largest demand for the local pharmaceutical industries. Therefore, it is assumed that the technology necessary for the local pharmaceutical industries will be transferred, diversify our economic resources, and attract the best international companies for the pharmaceutical industry, and it has given the opportunity to local companies.

6. CONCLUSION

The outbreak of COVID-19 pandemics in Oman caused an unprecedented situation. The world today is increasingly interconnected and interdependent. This global dynamic presents great opportunities but also comes with its share of challenges and hazards that continuously threaten our society. COVID-19 pandemic had reaffirmed the importance of health security to the State and individuals. COVID-19 has strengthened and redefined the approach of non-traditional security studies. The dimensions and approaches provided by non-traditional, comprehensive, widener school of thoughts has provided the theoretical fundamentals about how States dealing with the outbreak of COVID-19 pandemic. Traditional security system is comprehensively confronting new challenges due to the COVID-19.

The Covid-19 pandemic poses an unprecedented threat to human security, which recognizes health as an issue of national and international security in an interconnected world. While the pandemic may open the process of serious global engagement to deal with non-traditional security threats and find appropriate solutions, but the solutions will become effective only when they have incorporated new approaches to problem solving alongside the traditional ones. The national health system in Oman is facing a serious challenge as the spreads of the COVID-19 in Oman from the beginning of 2020. It shed lights on the important existence of a national health system ready to deal and operate normally under a health crisis. National health security is an essential element of a State stability. Infectious diseases can destabilize national security due to their high death tolls and staggering economic, psychological and social consequences. The health security is an integral part of the foundations of any country, and if this part is exposed to any threat or disorder as a result of the spread of an epidemic or the occurrence of natural disasters, this causes a potential security threat to the State function and stability. In conclusion, the outcome from this study is, the Oman National Health Security Policy, that should be the first policy focus on the national health security. The Oman National Health Security Policy (ONHSP)³ is the first comprehensive policy focusing specifically on the national goals of protecting people's health in the event of a health emergency. The purpose of the ONHSP is to guide the national efforts to deal with a wide range of potential diseases outbreaks and health crisis now and in the future.

² The Gulf Cooperation Council (GCC) is a political and economic union of Arab states bordering the Gulf. It was established in 1981 and its 6 members are the United Arab Emirates, Saudi Arabia, Qatar, Oman, Kuwait and Bahrain.

³ <https://www.oman.om/wps/portal/index/cr/lawsafetysecurity/nationalsecurity>

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AUTHORS' DECLARATIONS AND ESSENTIAL ETHICAL COMPLIANCES

Authors' Contributions (in accordance with ICMJE criteria for authorship)

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Collected the data	Yes	No
Contributed to data analysis & interpretation	Yes	Yes
Wrote the article/paper	Yes	Yes
Critical revision of the article/paper	Yes	Yes
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